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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/333,379	06/15/1999	LEROY G. HAGENBUCH	189405	4050

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EXAMINER

DAY, HERNG DER

ART UNIT PAPER NUMBER

2128

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/333,379

Applicant(s)

HAGENBUCH ET AL.

Examiner

Herng-der Day

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26,28-36,38 and 52-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 68 is/are allowed.
- 6) ☒ Claim(s) 1-26,28-36,38,52-67 and 69-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/15/99 and 12/4/02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/13/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Applicants' Amendment ("Amendment") to Office Actions dated December 8, 2004, mailed June 8, 2005, and received by PTO June 13, 2005.

1-1. Claims 64, 73, and 78 have been amended. Claims 1-26, 28-36, 38, and 52-81 are pending.

1-2. Claims 1-26, 28-36, 38, and 52-81 have been examined.

1-3. The indicated allowability of claims 1-26, 28-36, 38, 52-63, and 69-72 is withdrawn in view of the newly discovered issues related to the rejections under 35 U.S.C. 112, second paragraphs, as detailed in sections 4 to 4-14 below.

Drawings

2. The drawings are objected to for the following reasons. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the Examiner, the Applicants will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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2-1. Figures 1-3 and 21-22 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-26, 28-36, 38, 52-67, and 69-77 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01.

4-1. Claim 1 recites the limitation “(b) collecting data from the anticipated point of use including information regarding the shape of an actual load carried in an existing vehicle body as it extends upwards to the actual load top from at least two of a group consisting of (1) the body front wall, (2) one of the two body sidewalls and (3) the other of the two body sidewalls” in the claim. As described in step 8 of Fig. 18B, “a three-dimensional load model is developed which incorporates the actual side, front and rear angles of material repose and effectively blends together these respective side, front and rear angles of material repose thus, accounting for corner voids”. Accordingly, collecting data from two of a group consisting of three walls provides insufficient data for (d) developing a three-dimensional volumetric model as required by the disclosure.

4-2. Claim 1 recites the limitation “the shape of an actual load” in line 5 of the claim. There is insufficient antecedent basis for this limitation in the claim.

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4-3. Claim 7 recites the limitation “the length of the body floor” in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

4-4. Claim 21 recites the limitation “the haulage vehicle” in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

4-5. Claim 21 recites the limitation “the two angles of material repose being selected from a group consisting of (1) a front angle of material repose of the actual load as the actual load extends from the front wall of the body to a load top, (2) one of two side angles of material repose as the actual load extends from a respective one of sidewalls of the body to the load top and (3) the other of the two side angles of material repose as the actual load extends from the other of the sidewalls of the body to the load top” in process (d) of the claim. As described in step 8 of Fig. 18B, “a three-dimensional load model is developed which incorporates the actual side, front and rear angles of material repose and effectively blends together these respective side, front and rear angles of material repose thus, accounting for corner voids”. Accordingly, collecting data from two of a group consisting of three angles provides insufficient data for (d) developing a three-dimensional volumetric model as required by the disclosure.

4-6. Claim 31 recites the limitation “the haulage vehicle” in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

4-7. Claim 52 recites the limitation “the collected data information regarding the shape of an actual load carried in an existing vehicle body as it extends upwards to the actual load top from at least two of a group consisting of (1) the body front wall, (2) one of the two body sidewalls and (3) the other of the two body sidewalls” in process (f) of the claim. As described in step 8 of Fig. 18B, “a three-dimensional load model is developed which incorporates the actual side, front

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and rear angles of material repose and effectively blends together these respective side, front and rear angles of material repose thus, accounting for corner voids". Accordingly, collecting data from two of a group consisting of three walls provides insufficient data for (f) developing a three-dimensional volumetric model as required by the disclosure.

4-8. Claim 56 recites the limitation "the anticipated point of use" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

4-9. Claim 60 recites the limitation "the collected data including information regarding the shape of an actual load carried in an existing vehicle body as it extends upwards to the actual load top from at least two of a group consisting of (1) the body front wall, (2) one of the two body sidewalls and (3) the other of the two body sidewalls" in process (e) of the claim. As described in step 8 of Fig. 18B, "a three-dimensional load model is developed which incorporates the actual side, front and rear angles of material repose and effectively blends together these respective side, front and rear angles of material repose thus, accounting for corner voids". Accordingly, collecting data from two of a group consisting of three walls provides insufficient data for (e) developing a three-dimensional volumetric model as required by the disclosure.

4-10. Claim 64 recites the limitation "the body" in process (c) of the claim. There is insufficient antecedent basis for this limitation in the claim.

4-11. Claim 64 recites the limitation "the data includes at least two angles of repose for the heaped material selected from a group of angles of repose consisting of (1) a front angle, (2) a back angle (3) a first side angle, and (4) a second side angle" in process (a) of the claim. As described in steps 8-10 of Fig. 18B, "a three-dimensional load model is developed which

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incorporates the actual side, front and rear angles of material repose and effectively blends together these respective side, front and rear angles of material repose thus, accounting for corner voids". Accordingly, collecting data from two of a group consisting of four angles provides insufficient data for (b) determining a set of design parameters for the container from the collected data as required by the disclosure.

4-12. Claims 65-67 and 69-72 recite the limitation "the body" in each claim. There is insufficient antecedent basis for this limitation in each claim.

4-13. Claim 73 recites the limitation "(b) modeling a body to hold a load of the material, where the body's shape is defined by the collected data" in process (b) of the claim. However, "the collected data" from process (a) only describes angles of repose of heaped material in three dimensions. Accordingly, "the collected data" from process (a) provides insufficient data for (b) modeling a body as required by the disclosure.

4-14. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 78-81 are rejected under 35 U.S.C. 102(e) as being anticipated by Hagenbuch, U.S. Patent 5,887,914 issued March 30, 1999.

6-1. Regarding claim 78, Hagenbuch discloses a body of a haulage vehicle made by a process comprising:

(a) modeling a shape of a load of heaped material in three dimensions, where the shape is substantially conical and the material is a particular material whose characteristics affect angles of repose in three dimensions that comprise the shape of the heaped material (FIG. 10B, loaded 2:1 heap);

(b) modeling a body to hold the substantially conically shaped load of the material, where a shape of the body is defined by predetermined parameters; and (c) producing the body according to values of the predetermined parameters resulting from the modeling of the body (FIG. 14A and 14B).

6-2. Regarding claim 79, Hagenbuch further discloses the predetermined parameters include one or more of (1) a position of the body's floor, (2) a position of the body's sidewalls (3) a length of the floor, (4) a height of sidewalls, (5) a distance between the respective sidewalls and (6) a position of the body front wall (for example, FIG. 9A, body floor line).

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6-3. Regarding claim 80, Hagenbuch further discloses adjusting the predetermined parameters to locate a location for a center of gravity of material held in the modeled body that approximates a lowest possible position for the center of gravity (FIG. 14B, step 8e).

6-4. Regarding claim 81, Hagenbuch further discloses adjusting the predetermined parameters to allow material to be dropped into the modeled body from a lowest practical vertical elevation over a floor of the body (FIG. 14A, step 3, minimum distance above chassis).

Allowable Subject Matter

7. Claim 68 is allowed.

8. Claims 1-26, 28-36, 38, 52-67, and 69-77 would be allowable if the above rejections under 35 U.S.C. 112, second paragraph, are overcome.

Applicants' Arguments

9. Applicants argue the following:

(1) "Applicants have amended claim 64 to reflect applicants' appreciation that different materials within these categories heap differently and that these differences should be taken into account in designing custom bodies for designated work sites" (page 18, Amendment).

(2) "The Office action does not reject the claim on art, but references the Caterpillar Release in paragraph 26. The Release is not relevant to the invention of claim 73 for the same reasons identified above with reference to claim 64" (page 198, Amendment).

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(3) "Each of the rejected independent claims state that the shape of the heaped material is affected by the characteristics of the particular material the body is intended to haul. This is completely unlike the "one size fits all" approach of the prior art relied up to reject the claims" (page 19, Amendment).

Response to Arguments

10. Applicants' arguments have been fully considered.

10-1. Applicants' arguments (1) - (2) are persuasive. The rejections of claims 64-67 and 73-77 under 35 U.S.C. 103(a) and 112, second paragraph, in Office Action dated December 8, 2004, have been withdrawn.

10-2. Applicants' argument (3) is not persuasive. When the particular heaped material has the characteristics of a 2:1 heap, which has not been excluded from the claim, the prior art meets the claimed limitations.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jean R. Homere can be reached on (571) 272-3780. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day
September 6, 2005

Thai Phan
Patent Examiner
AU. 2128